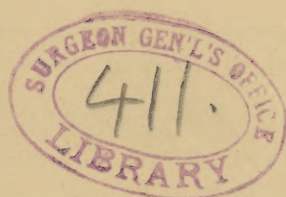
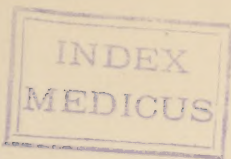


Haynes (Fr. L.)

Supra-pubic lithotomy;

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SUPRA-PUBIC LITHOTOMY:

HISTORY OF ONE OPERATION.

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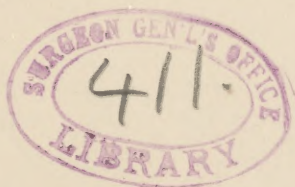
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I HAVE been requested to give a careful description of an operation made on a patient referred to me by Dr. Arnott of Pasadena.

It may be premised that before making supra-pubic cystotomy, the surgeon should go through all the steps of the operation on the cadaver. He should study Keyes' description in the last edition of his work on urinary diseases, and in Sajous' Annual, and above all an abstract of an invaluable study by Eigenbrodt. (Med. Record, Sep. 29, '88, p. 393; also Amer. Jour. Med. Sci., Aug. '88.)

The patient, a healthy looking man, aged 35, had suffered from obscure bladder symptoms since an attack of renal colic, which occurred fourteen years ago. Dr. Arnott was the first to demonstrate the presence of a calculus in his bladder. The urine contained casts, hence chloroform was the anæsthetic used.

The instruments were cleaned, arranged in pans and boiled for two hours; the hands of operator and assistants were assiduously scrubbed and soaked in tartaric-sublimate solution 1:500. Throughout the operation the hands of all engaged were carefully washed after anything not thoroughly purified had been touched, the utmost care being taken when it was necessary to pass the finger into the bladder just after it had been in the rectum. An assistant flooded the interior of the



bladder, the wound, and the prevesical space with hot water, at frequent intervals. Instead of sponges, pieces of boiled and baked cheese-cloth were used. The parts were scrubbed, shaved, and bathed in sublimate solution. The bowels were thoroughly emptied, and the rectum washed out by repeated enemata, especial care being taken to evacuate the last one by a tube. The hips were elevated by placing three large pillows protected by rubber cloth beneath them. (Perhaps a better way to place the patient in the Trendelenberg position is to raise one end of the table.)

A metallic catheter with rubber tubing attached was inserted, and the bladder thoroughly and repeatedly flushed with hot water. Then eight ounces of hot water were injected, the tube at the end of the catheter compressed by catch forceps, and the catheter secured in position by tying tubing around the penis.

OPERATION.

A transverse incision was made, $2\frac{1}{4}$ inches long, down to the muscles, and just over the pubic brim. The fingers of the left hand now pressed against the sheath of the muscles, stretching their attachments to the bone, so that a few touches of the knife freed them for a space of two inches. This incision was made as though the object in view were "the cutting away of the soft parts from the upper and posterior portion of the symphysis." A well marked blue-gray fascia was now seen, and divided by the knife, disclosing some fat. Two fingers of the left hand, with their backs toward the bone were now passed down behind the symphysis toward the neck of the bladder, and all the soft tissues (fat) lying anterior to the bladder peeled from that organ, and drawn carefully upward until the bladder could be plainly seen. When the peritoneum lies low in front of the bladder it is contained in this mass of fat, which therefore should always be rolled up. The bladder is recognized by its grayish appearance, by the large veins passing longitudinally over its surface, and by its spherical shape and the fluctuating sensation conveyed to the finger.

The bladder wall was now gently lifted toward the external wound by two delicate hooks, and an incision half an inch long made into it, taking no care to avoid the veins. The catheter was then removed. After the bladder had partially collapsed, its walls were lightly caught on either side and above the in-

cision by catch forceps, which by their weight held the organ near the surface and yet allowed it to sink back when necessary. A slender pair of forceps were now inserted into the bladder, then the finger, to feel the stone, which was caught in its smallest diameter and extracted. (Size, 1 in. by $\frac{1}{2}$ in.)

The finger was again inserted and the bladder carefully examined, but nothing peculiar discovered, except two high septa at the base.

A broad grooved staff was next past through the urethra, so that its tip barely projected into the bladder. The finger was placed in the rectum with its tip near the end of the staff, and a narrow straight bistory inserted, with back toward the rectum, starting half an inch in front of the anus, and passed upward close to the anterior wall of the rectum, until its point reached the staff at a spot in the prostatic urethra near the neck of the bladder. A probe, threaded with boiled silk, carrying a soft red catheter, was now passed along the knife, into the groove of the staff, and along that into the bladder, then caught by the finger inside the bladder, and pulled through the external wound. The catheter was then pulled through, the silk removed, and the catheter left with its eye looking downward just within the bladder, and secured in position by a perineal skin stitch. (The catheter, No. 30, French, is prepared by passing along its bore and through its tip, a needle armed with a long thread with a large knot in its middle. The knot is pulled up until it lodges against the inside of the catheter tip and the needle replaced by an eyed probe.)

The bladder wound was now sutured by a continuous chrome catgut thread with a slender curved hypodermic-pointed needle, which was inserted on the external surface of the bladder, one-fourth inch from the edge of the wound, passed down through the tissues, out at the extreme internal edge of the mucosa, and through the opposite side in a reversed direction. The stitches were about one-fourth inch apart. This is the most delicate portion of the operation; the mucosa slides away from the muscular coat and has to be held in place by a delicate hook. The assistant must touch the wound with a bit of gauze before every insertion of the needle so that the mucosa can be distinctly seen. This stitch exactly resembles that used in vesicovaginal fistula, and is simply perfect in securing exact closure of the bladder wound. The ends of the abdominal wound were

closed by two sutures, but its main portion was packed lightly with iodoform gauze, and six or seven ample layers of the same material strapped over it. The packing was removed next day and the wound filled with iodoform. Rapid healing without suppuration took place, after a second dressing. The perineal tube was kept clear by injecting an ounce of borated water every two hours. It was removed on the fifth day, and the bladder kept nearly empty by inserting through the urethra the catheter every two hours. Recovery was rapid and perfect without the slightest rise of temperature or pulse.

REMARKS.

The low, transverse incision exposes the seat of operation much better than the longitudinal cut.

If care is taken to roll up the prevesical fat, it is difficult to injure the peritoneum. Suturing the bladder seems to be the best method of preventing urinary infiltration.

If the tissues, as in the above case, are shaved from the bone it is impossible to thoroughly suture the wound; if, however, it is left open and kept aseptic, free drainage of the prevesical space is insured, and healing occurs with great rapidity.

The perineal drain was used in deference to the high authority of Keyes, but I would be inclined in another case to fasten a large soft catheter in the urethra, keeping it clear by frequent flushing. If it produced irritation, I would remove it and catheterize every two hours. When it is at all difficult to catheterize, or where cystitis exists in a severe form, the perineal drain is probably the best.

